# TEST REPORT OF FINE AGGREGATE

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2017-01-16-03** **Date: 20-01-17** |
| **Customer** | : | Assistant Executive Engineer, Kodigehalli Sub division, BBMP, Bangalore. |
| **Address** | : | Kodigehalli Sub division, BBMP, Bangalore. |
| **Project Name** | : | Providing street sign boards to main and cross roads of Kodigehalli in ward No.08(2nd Call) |
| **Agency** | : | Sri. K.Anil Kumar, No.84-L, 2nd floor, 3rd cross, 4th main, HAL, 3rd stage, Thippasandra, Bangalore-560075 |
| **Customer's Reference** | : | EE/BTP/BBMP/E-PMT/236/2015-16 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 16-01-17 |
| **Sample ID No** | : | 2017-01-16-03/03 |
| **Sample Type** | : | Fine Aggregate |
| **Reference to BIS codes** | : | IS 383 : 2016 (Specification for Coarse and fine Aggregates)<br>IS: 2386 :1963(Part - 1, 3) RA2012<br>IS 2386 Part 1: Particle Size and Shape<br>IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption |
| **Date of test** | : | 16-01-17 |
| **Total weight taken** | : | 1000 grams |

| Sl.no | Sieve Size | Weight Retained (gms) | Cumulative Weight Retained (gms) | % Cumulative Weight Retained | % Passing | Requirement as per IS 383:2016 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Grading Zone I | Grading Zone II | Grading Zone III | Grading Zone IV |
| 1 | 10 mm | 0 | 0 | 0 | 100 | 100 | 100 | 100 | 100 |
| 2 | 4.75 mm | 25 | 25 | 2.5 | 97.5 | 90-100 | 90-100 | 90-100 | 95-100 |
| 3 | 2.36 mm | 129 | 154 | 15.4 | 84.6 | 60-95 | 75-100 | 85-100 | 95-100 |
| 4 | 1.18 mm | 222 | 376 | 37.6 | 62.4 | 30-70 | 55-90 | 75-100 | 90-100 |
| 5 | 600 micron | 298 | 674 | 67.4 | 32.6 | 15-34 | 35-59 | 60-79 | 80-100 |
| 6 | 300 micron | 185 | 859 | 85.9 | 14.1 | 5-20 | 8-30 | 12-40 | 15-50 |
| 7 | 150 micron | 95 | 954 | 95.4 | 4.6 | 0-10 | 0-10 | 0-10 | 0-15 |
| 8 | Pan | 46 | 1000 | 100 | 0 | --- | --- | --- | --- |
| **Result :The tested Sample Conforms to Grading Zone I** | | | | | | | | | |



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# TEST REPORT OF FINE AGGREGATE

**Lab ID** : **CP-2017-01-16-03** **Date: 20-01-17**

**Sample ID No** : 2017-01-16-03/03

## PHYSICAL PROPERTIES

| Sl.no | Tests | Result | Requirements as per IS 383:2016 |
|---|---|---|---|
| 1 | Water Absorption(%) | 1.78 | _ |
| 2 | Specific Gravity | 2.56 | _ |
| 3 | Material finer than 75 micron(%) | 4.2 | Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10% |

**Note:**
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
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**Prepared by**
Harshitha

CIVIL PRO Sig..... Date..... BANGALORE

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.
Bangalore.


****End of Report****

## TEST REPORT ON COARSE AGGREGATES

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2017-01-16-03** **Date: 20-01-2017** |
| **Customer** | : | Assistant Executive Engineer, Kodigehalli Sub division, BBMP, Bangalore. |
| **Address** | : | Kodigehalli Sub division, BBMP, Bangalore. |
| **Project Name** | : | Providing street sign boards to main and cross roads of Kodigehalli in ward No.08(2nd Call) |
| **Agency** | : | Sri. K.Anil Kumar, No.84-L, 2nd floor, 3rd cross, 4th main, HAL, 3rd stage, Thippasandra, Bangalore-560075 |
| **Customer's Reference** | : | EE/BTP/BBMP/E-PMT/236/2015-16 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample condition** | : | Satisfactory |
| **Date of Receipt** | : | 16-01-17 |
| **Sample ID No** | : | 2017-01-16-03/02 |
| **Sample Type** | : | 40mm down size coarse aggregate |
| **Reference to BIS codes** | : | IS: 383:2016 (Specification for Coarse and fine Aggregates )<br>IS: 2386 :1963(Part - 1,3,4) RA2011<br>IS 2386 Part 1: Particle Size and Shape<br>IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption<br>IS 2386 Part 4: Mechanical Properties |
| **Date of test** | : | 16-01-17 |

**SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:**

**Total weight taken : 15000 grams**

| Sample No. | Sieve No. | Weight Retained in gms | Cumulative Weight Retained in gms | % Cumulative Weight Retained | % Passing | Required as per IS 383:2016 |
|---|---|---|---|---|---|---|
| 1 | 80 mm | 0 | 0 | 0.0 | 100 | 100 |
| 2 | 40 mm | 251 | 251 | 1.7 | 98.3 | 90-100 |
| 3 | 20 mm | 8254 | 8505 | 56.7 | 43.3 | 30-70 |
| 4 | 10 mm | 4278 | 12783 | 85.2 | 14.8 | 10-35 |
| 5 | 4.75 mm | 1554 | 14337 | 95.6 | 4.4 | 0-5 |
| 6 | Pan | 663 | 15000 | 100.0 | 0 | --- |



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Bangalore.

## TEST REPORT ON COARSE AGGREGATES

**Lab ID** : **CP-2017-01-16-03** **Date: 20-01-2017**

**Sample ID No** : 2017-01-16-03/02

**PHYSICAL PROPERTIES**

| Sl.no | Tests | Result | Requirements as per IS:383-2016 |
|---|---|---|---|
| 1 | Flakiness Index(%) | 10.5 | Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate |
| 2 | Elongation Index(%) | 12.5 | |
| 3 | Specific Gravity | 2.61 | _ |
| 4 | Bulk Density(Loose) (Kg/l) | 1.51 | _ |
| 5 | Bulk Density(Compacted) (Kg/l) | 1.57 | _ |
| 6 | Water Absorption(%) | 0.25 | _ |

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**Prepared by**
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**FOR CIVIL Pro.**

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**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**

Assistant Executive Engineer



****End of Report****

## TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

**Lab ID** : **CP-2017-01-16-03** **Date: 19-01-2017**

**Customer** : Assistant Executive Engineer, Kodigehalli Sub division, BBMP, Bangalore.

**Address** : Kodigehalli Sub division, BBMP, Bangalore.

**Project Name** : Providing street sign boards to main and cross roads of Kodigehalli in ward No.08(2nd Call)

**Agency** : Sri. K.Anil Kumar, No.84-L, 2nd floor, 3rd cross, 4th main, HAL, 3rd stage, Thippasandra, Bangalore-560075

**Customer's Reference** : EE/BTP/BBMP/E-PMT/236/2015-16

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 16-01-17

**Sample ID No** : 2017-01-16-03/01

**Sample Type** : Birla super 53grade

**Reference to BIS codes** : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6

**Date of test** : 17-01-17

| Sl.No. | Physical properties | Results | Requirement as per IS 12269: 2013 |
|---|---|---|---|
| 1 | Fineness by dry sieving (%) | 2.65 | – |
| 2 | Finess by Air permeablity method ($m^2$/kg, Min) | 278.5 | 225$m^2$/kg, Min |
| 3 | Density (gm/cc) | 3.19 | – |
| 4 | Standard Consistency (%) | 29.0% | Not specified |
| 5 | Initial Setting time | 155 minutes | Not less than 30 minutes |
| 6 | Final Setting time | 265 minutes | Not more than 600 minutes |
| 7 | Soundness (Le Chatelier's Method) | 1.5mm | Not more than 10 mm |

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## TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2017-01-16-03** **Date: 14-02-2017** |
| **Customer** | : | Assistant Executive Engineer, Kodigehalli Sub division, BBMP, Bangalore. |
| **Address** | : | Kodigehalli Sub division, BBMP, Bangalore. |
| **Project Name** | : | Providing street sign boards to main and cross roads of Kodigehalli in ward No.08(2nd Call) |
| **Agency** | : | Sri. K.Anil Kumar, No.84-L, 2nd floor, 3rd cross, 4th main, HAL, 3rd stage, Thippasandra, Bangalore-560075 |
| **Customer's Reference** | : | EE/BTP/BBMP/E-PMT/236/2015-16 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 16-01-17 |
| **Sample ID No** | : | 2017-01-16-03/01 |
| **Sample Type** | : | Birla super 53grade |
| **Reference to BIS codes** | : | IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,<br>IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5<br>IS 4031 Part 6, Determination of Compressive Strength, Clause 6 |
| **Date of test** | : | 17-01-17 |

**Compressive Strength**

| Sl.No. | Physical properties | Results | Requirement as per IS 12269: 2013 |
|---|---|---|---|
| 1 | 3 Days | 28.5N/mm$^2$ | Not less than 27 N/mm$^2$ |
| 2 | 7 Days | 39.0N/mm$^2$ | Not less than 37 N/mm$^2$ |
| 3 | 28 Days | 56.5N/mm$^2$ | Not less than 53 N/mm$^2$ |

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****End of Report****

# TEST REPORT OF CEMENT CONCRETE CUBES

**Lab ID** : **CP-2017-01-30-03** **Date: 22-02-17**

**Customer** : Assistant Executive Engineer, Kodigehalli Sub division, BBMP, Bangalore.

**Address** : Kodigehalli Sub division, BBMP, Bangalore.

**Project Name** : Providing street sign boards to main and cross roads of Kodigehalli in ward No.08(2nd Call)

**Agency** : Sri. K.Anil Kumar, No.84-L, 2nd floor, 3rd cross, 4th main, HAL, 3rd stage, Thippasandra, Bangalore-560075

**Customer's Reference** : EE/BTP/BBMP/E-PMT/236/2015-16

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 30-01-17

**Sample ID No** : 2017-01-30-03/02

**Customer ID** : PCC

**Sample Type /Size** : 150X150X150 mm

**Sample grade/Age** : M20 / 28 Days Compressive Strength

**Reference to BIS codes** : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

**Date of test** : 22/02/2017

| Sl. No. | Identification Mark | Grade of concrete | Date of Casting | Date of Testing | Dimension of the Specimen (mm) | Cross sectional area (Sq.mm) | Weight of the sample (kg) | Failure Load (KN) | Compressive strength ($N/mm^2$) | Average Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PCC | M20 | 25/01/2017 | 22/02/2017 | 150.38 X 149.89 X 151.56 | 22540 | 8.269 | 532.0 | 23.6 | 23.5 |
| 2 | PCC | M20 | 25/01/2017 | 22/02/2017 | 149.58 X 151.51 X 150.37 | 22663 | 8.244 | 525.8 | 23.2 | |
| 3 | PCC | M20 | 25/01/2017 | 22/02/2017 | 150.59 X 150.89 X 149.18 | 22723 | 8.214 | 538.5 | 23.7 | |

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# TEST REPORT OF CEMENT CONCRETE CUBES

**Lab ID** : **CP-2017-01-30-03** **Date: 01-02-17**

**Customer** : Assistant Executive Engineer, Kodigehalli Sub division, BBMP, Bangalore.

**Address** : Kodigehalli Sub division, BBMP, Bangalore.

**Project Name** : Providing street sign boards to main and cross roads of Kodigehalli in ward No.08(2nd Call)

**Agency** : Sri. K.Anil Kumar, No.84-L, 2nd floor, 3rd cross, 4th main, HAL, 3rd stage, Thippasandra, Bangalore-560075

**Customer's Reference** : EE/BTP/BBMP/E-PMT/236/2015-16

**Source of Sample** : Sample supplied by Agency

**Sample Condition** : Satisfactory

**Date of Receipt** : 30-01-17

**Sample ID No** : 2017-01-30-03/01

**Customer ID** : PCC

**Sample Type /Size** : 150X150X150 mm

**Sample grade/Age** : M20 / 7 Days Compressive Strength

**Reference to BIS codes** : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

**Date of test** : 01/02/2017

| Sl. No. | Identification Mark | Grade of concrete | Date of Casting | Date of Testing | Dimension of the Specimen (mm) | Cross sectional area (Sq.mm) | Weight of the sample (kg) | Failure Load (KN) | Compressive strength ($N/mm^2$) | Average Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PCC | M20 | 25/01/2017 | 01/02/2017 | 151.24 X 149.48 X 150.65 | 22607 | 8.215 | 388.8 | 17.2 | 17.3 |
| 2 | PCC | M20 | 25/01/2017 | 01/02/2017 | 149.76 X 150.21 X 149.59 | 22495 | 8.285 | 380.2 | 16.9 | |
| 3 | PCC | M20 | 25/01/2017 | 01/02/2017 | 151.38 X 150.18 X 149.89 | 22734 | 8.281 | 402.4 | 17.7 | |

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****End of Report****